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ABSTRACT

A study was conducted at a program in rural southwest Virginia to determine whether Head Start parents and adult basic education/high school equivalency program students use critical thinking skills. More than 50 definitions of critical thinking were collected, and Bloom's Taxonomy was reviewed for background information. The teachers' manual for the GED (General Educational Development) tests also was reviewed. A journal of classroom observations and reflections was kept, and three classes were videotaped. The study found that the students were able to compare, judge, and evaluate. Critical thinking also was demonstrated as students spontaneously discussed a short story. Students were able to relate the short story plot to a real-life incident. Additional findings included that the students told the teacher how and what to teach through subtle messages. The study concluded that teachers should tape at least one class and listen to their students carefully in order to model their own critical thinking skills. (KC)

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Virginia Adult Education Research Network

Practitioner Research Briefs, 1999-2000 Report Series

Thinking about Students' Thinking

Barbara Guthrie, Montgomery County Public Schools

Background

I teach students from rural Southwest Virginia. Two of my classes are for Headstart parents and another class is part of a community-based ABE/GED program. Each class meets two hours every week. Last summer I participated in a workshop about thinking skills. During that course I began to wonder if my students think critically. Critical thinking involves making sound choices. It has implications for one's personal life as well as for what kind of society we have now and in the future. I decided to document the higher level critical thinking skills that were occurring in my classes.

Inquiry

What evidence is there that my students are using critical thinking skills?

Action

After pondering the topic considerably with my colleagues, I began preparing myself to observe the classes. From various sources, I collected over fifty definitions of critical thinking. I prefer a combination of the following two definitions. First, "Critical thinking is the art of thinking about your thinking while you're thinking in order to make your thinking better, more clear, more accurate, and more defensible." Secondly, "Critical thinking is ensuring that you use the best thinking you are capable of."

Next I reviewed Bloom's Taxonomy to know what I was looking for in my students. Bloom classified thinking into these six basic levels: knowledge, comprehension, application, analysis, synthesis, and evaluation. Unfortunately, these levels were new to me because I had finished college when his theory was being taught. I was not sure which of Bloom's skills were needed on the GED so I also read the front section of the Teacher's Manual for the Official GED Practice Tests. I discovered each of the five sections of the GED test require certain thinking skills. For instance, the first part of the writing section requires application instead of synthesis, which is used on the essay. Analysis and evaluation skills are included in the science and social studies section along with comprehension and application skills in the latter. Application is required in math and reading. Reading also requires comprehension and analysis. I've used this book for over ten years for scoring purposes but I had always skipped the part about cognitive demands of items.

Finally, I posted my question on two Internet sites: Allexperts.com and the Critical Thinking Forum. I wanted experts' opinions as to what to look for when investigating my students' thinking skills. One suggestion that I disagree with was to develop assessments that are designed to falsify a statement such as, "This student has critical thinking skills." It is a way to prove a hypothesis false. It is not my style to attack a question from a negative point of view. I did agree with the respondent that said, "If a student is making a leap from the known into the unknown, this is a sure sign of critical thinking." An instructor of military officers wrote, "Whenever I needed to ensure that my students were using their 'critical thinking muscles' I ask what-if questions. The what-if method pointed things out most quickly and I also knew where to back up and re-group when necessary." I am going to try asking more of the what-if questions with my students. I learned from these replies that thinking about thinking is being done by a variety of people in various situations worldwide.

Data Collection

I kept a journal of my classroom observations and reflections. I made three tapes of the classes and

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transcribed them. I also collected an assortment of homework assignments and essays written by the students.

Findings

As I began to focus on the data, I could see that the students were able to compare, judge, and evaluate. For example, in one assignment involving forced metaphor, I asked students to compare a GED class to a trip. I wanted to have my students compare two unlike ideas by using synthesis and analysis. Their answers ranged from, "You learn things from taking a trip and you also learn things in GED classes" to "Smoke breaks . . . people you don't know...wind in your face."

A rewarding event came one night while I was taping a discussion on a short story. To my surprise, I could recognize critical thinking taking place as my students were spontaneously discussing the story. They were able to take the plot and relate it to a real-life incident. This was without any coaxing from me. They were using several critical thinking skills effortlessly.

Additional findings culled from the transcripts included the fact that my students were telling me how and what to teach through subtle messages. For example one student repeatedly whispered,

"She's going too fast."

I have also learned the following:

- Collecting data from students requires listening intently.
- How you ask a question will influence the critical thinking level of the response.
- Some of my students cannot express how they know what they know.
- Wait time after a question is valuable; I should allow for more.
- All answers should be acknowledged.
- Even though my students are adults they still need praise and empathy.

Implications and Future Directions

The results of my research were actually secondary to the process. By this I mean that the taping and transcribing of my classes was a real eye-opener. I recommend that all practitioners do it at least once in each class. No matter what you are teaching or researching it is paramount that you listen to your students carefully. Occasionally a teacher needs to just set her agenda aside. Critical thinking is definitely taking place. Sometimes it is taking place blatantly and other times it is taking place quite subtlety. Critical thinking is one skill that should be modeled in the classroom. I need to apply my own improved thinking skills to my practice. Next year I plan on teaching critical thinking strategies by weaving them into my regular lessons. ❑

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